

(Rev 2-32)

PATENT AND TRADEMARK OFFICE
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Serial No.:
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Applicant: Gerhard HARTWICH

U.S. PATENT DOCUMENTS

Examiner Initials	Document Number	Date	Name	Sub-Class	Filing Date, if Appropriate
AC	5,102,798	04/07/1992	GUISEPPI-ELIE	435/177	
	5,312,527	05/17/1994	MIKKELSEN et al.	204/153.12	
	5,822,946	04/23/1997	SESSLER et al.	514/185	
	5,770,369	06/23/1998	MEADE et al.	435/6	
	5,824,473	10/20/1998	MEADE et al.	435/6	
	6,221,586 B1	04/24/2001	BARTON et al.	435/6	

FOREIGN PATENT DOCUMENTS

Examiner Initials	Document Number	Date	Country	Sub-Class	Class	Translation Yes No
	42 16 696 A1	10/28/1993	GERMANY	G01N	33/53	
	95/15971	06/15/1995	WIPO	C07H	21/00	
	96/00901	01/11/1996	WIPO	G01N	33/53	
	96/35940	11/14/1996	WIPO	G01N	21/77	
	96/40712	12/19/1996	WIPO	C07H	21/00	
	0 831 327 A1	03/25/1998	EPO	G01N	31/22	
	97/46568	12/11/1997	WIPO	C07H	19/067	
	98/20162	05/14/1998	WIPO	C12Q	1/68	
	98/31839	07/23/1998	WIPO	C12Q	1/68	
	99/04440	01/28/1999	WIPO	H01L	51/20	
AC	99/51778	10/14/1999	WIPO	C12Q	1/68	
	00/31101	06/02/2000	WIPO	C07H	21/00	

Examiner Anne Kr. Chakrabarti Date Considered

7/10/03

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Atty Docket: 01100720
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 (Use several sheets if necessary)

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, etc.)

AC BAINS, William and Geoff C. SMITH, "A Novel Method for Nucleic Acid Sequence Determination", *J. Theor. Biol.* 135, pp. 303-307, (1989).

CATLIN, Joseph C., Ronald S. PARDINI, G. Doyle DAVES, Jr., James C. HEIDKER and Karl FOLKERS, New Hydroxyquinones, Apparent Inhibitors of Coenzyme Q Enzyme Systems", *Journal of the American Chemical Society* 90:13, pp.3572-3574, (1968).

- *Chemical Abstracts*, vol. 70, p. 388 (1969).

- *Chemical Abstracts*, vol. 113, p. 440 (1990).

- *Chemical Abstracts*, vol. 115, p. 30 (1991).

- *Chemical Abstracts*, "General Biochemistry, vol. 127, No. 1, p. 249 (1997).

- *Chemical Abstracts*, "Radiation Chem., Photochem. & Other Reprog. Processes", Vol. 129, No. 20, pp. 1442-1443 (1996).

DAVE, Jr., G. Doyle, Joseph J. WILCZYNSKI, Palle FRIIS, and Karl FOLKERS, "Synthesis of R-hydroquinone and Other Multiprenyl-1,4-benzoquinones Biosynthetically Related to Ubiquinone", *Journal of the American Chemical Society* 90:20, pp.5587-5593, (1968).

- DIEDERICHSEN, Ulf, "Ladungstransport in DNA: eine Kontroverse", *Angew. Chem.* 109, Nr. 21, pp. 2411-2413 (1997).

- DRMANAC, Radoje, Ivan LABAT, Ivan BRUKNER, and Radomir CRKVENJAKOV, "Sequencing of Megabase Plus DNA by Hybridization: Theory of the Method", *Genomics* 4, pp.114-128, (1989).

EIKYU, Yoshiteru, Yoshinori NAKAMURA, Taislin AKIYAMA, Fumio YONEDA, Kiyoshi TANAKA and Kaoru FUJI, "Hybridization of Oligodeoxynucleotide with Redox Coenzyme Model; Synthesis and Properties of Thymidine Decamers Covalently Linked to 5-Deazaflavin", *Chem. Pharm. Bull.* 40(1), pp. 291-293 (1992).

FRIER, Christelle, Jean-Luc DÉCOUT, and Marc FONTECAVA, "Method for Preparing New Flavin Derivatives: Synthesis of Flavin-Thymine Nucleotides and Flavin-Oligonucleotide Adducts", *J. Org. Chem.* 62, pp. 3520-3528, (1997).

FRIER, Christelle, Jean-François MOUSCADET, Jean-Luc DÉCOUT, Christian AUCLAIR, and Marc FONTECAVA, "Flavin-Oligonucleotide Conjugates: Sequence Specific Photocleavage of DNA", *Chem. Commun.*, pp. 2457-2458, (1998).

GASPER, Susan M. and Gary B. SCHUSTER, "Intramolecular Photoinduced Electron Transfer to Anthraquinones Linked to Duplex DNA: The Effect of Gaps and Traps on Long-Range Radical Cation Migration", *J. Am. Chem. Soc.* 119, pp. 12762-12771 (1997).

HOLMLIN, R. Erik, Peter J. DANDLKER and Jacqueline K. BARTON, "Ladungsübertragung durch den DNA-Basenstein", *Angew. Chem.* 109, pp. 2830-2848, (1997).

HOLMLIN, R. Erik, Ricky T. TONG, and Jacqueline K. BARTON, "Long-Range Triplet Energy Transfer Between Metallointercalators Tethered to DNA: Importance of Intercalation, Stacking, and Distance", *J. Am. Chem. Soc.* 120, pp. 9724-9725, (1998).

HURLEY, Dennis J. and Yitzhak TOR, "Metal-Containing Oligonucleotides: Solid-Phase Synthesis and Luminescence Properties", *J. Am. Chem. Soc.* 120, pp. 2194-2195, (1998).

AC IHARA, Toshihiro, Masamichi NAKAYAMA, Mitsuru MURATA, Koji NAKANO and Mizuo MAEDA, "Gene Sensor Using Ferrocenyl Oligonucleotide", *Chem. Commun.*, pp. 1609-1610 (1997).

Examiner

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JACQUET, Luc, R. Jeremy H. DAVIES, Andr  e KIRSCH-DE KIPMAEKER, and John M. KELLY, "Photoaddition of Ru(ter)(bpy)₃²⁺ to DNA: A New Mode of Covalent Attachment of Metal Complexes to Duplex DNA", *J. Am. Chem. Soc.* 119, pp. 11763-11768, (1997).

JOHNSTON, Dean H., Katherine C. GLASGOW, and H. Holden THORP, "Electrochemical Measurement of the Solvent Accessibility of Nucleobases Using Electron Transfer Between DNA and Metal Complexes", *Amer. Chem. Soc.* 117, pp. 8933-8938 (1995).

KATZ, Eugenii, Daniela D. SCHLERETH and Hanns-Ludwig SCHMIDT, "Electrochemical Study of Pyrroloquinoline Quinone Covalently Immobilized as a Monolayer onto a Cystamine-Modified Gold Electrode", *Journal of Electroanalytical Chemistry* 367, pp. 59-70, (1994).

KORRI-YOUSSEFI, H., F. GARNIER, P. SRIVASTAVA, P. GODILLOT, and A. YASSAR, "Toward Bioelectronics: Specific DNA Recognition Based on an Oligonucleotide-Functionalized Polypyrrole", *J. Am. Chem. Soc.* 119, pp. 7388-7389, (1997).

MAGDA, Darren, Meredith WRIGHT, Shaun CROFTS, Alice LIN, and Jonathan L. SESSLER, "Metal Complex Conjugates of Antisense DNA Which Display Ribozyme-Like Activity", *J. Am. Chem. Soc.* 119, pp. 6947-6948, (1997).

MEGGERS, Eric, Dirk KUSCH, and Bernd GIESE, "An Efficient Synthesis of Enantiomerically Pure Δ - and Λ -Ru(ter)(B)-Labelled Oligonucleotides", *Helvetica Chimica Acta* vol. 80, pp. 640-652 (1997).

MILLAN, Kelly M., Angela SARAULLO, and Susan R. MIKKELSEN, "Voltammetric DNA Biosensor for Cystic Fibrosis Based on a Modified Carbon Paste Electrode", *Analytical Chemistry*, vol. 66, No. 18, pp. 2943-2947, (1994).

MOORE, Harold W. and Karl FOLKERS, "New Method for Structural Assignments of Hydroxy Analogs of Coenzyme Q", *Journal of the American Chemical Society* 88.3, pp. 564-570, (1966).

NAKAMURA, Nobuhumi, Takemitsu KOHJIMA, and Shinnichiro SUZUKI, "Electrochemical Properties of Coenzyme Pyrroloquinolinequinone Using a Di-(4-pyridyl) Disulfide Modified Gold Electrode Under Acidic Conditions", *Bull. Chem. Soc. Jpn.* 66, pp. 1289-1291 (1993).

PASTERNAK, Robert F., Esther J. GIBBS, Peter J. COLLINGS, Julio C. dePAULA, L. Christine TURZO, and Antonio TERRACINA, "A Nonconventional Approach to Supramolecular Formation Dynamics. The Kinetics of Assembly of DNA-Bound Porphyrins", *J. Am. Chem. Soc.* 120, pp. 5873-5878, (1998).

REED, Michael W., Ansel WALD, and Rich B. MEYER, "Triplex-Directed Interstrand DNA Cross-Linking by Diaziridinylquinone-Oligonucleotide Conjugates", *J. Am. Chem. Soc.* vol. 120, No. 38, pp. 9729-9734, (1998).

SCOTT, A. Ian, "How Were Porphyrins and Lipids Synthesized in the RNA World?", *Tetrahedron Letters*, vol. 38, No. 28, pp. 4961-4964, (1997).

SOSNOWSKI, Ronald G., Eugene TU, William F. BUTLER, James P. O'CONNELL, and Michael J. HELLER, "Rapid Determination of Single Base Mismatch Mutations in DNA Hybrids by Direct Electric Field Control", *Proc. Natl. Acad. Sci. USA* vol. 94, pp. 1119-1123, (1997).

WILLNER, Itamar, Eugenii KATZ, Bitha WILLNER, Ron BLONDER, Vered HELEG-SHABTAL and Andreas F. B  CKMANN, "Assembly of Functionalized Monolayers of Redox Proteins on Electrode Surfaces: Novel Bioelectronic and Optobioelectronic Systems", *Biosensors & Bioelectronics*, vol. 12, No. 4, p. 337-356 (1997).

WILLNER, Itamar, Vered HELEG-SHABTAL, Ron BLONDER, Eugenii KATZ, Guofang TAO, Andreas F. B  CKMANN, and Adam HELLER, "Electrical Wiring of Glucose Oxidase by Reconstitution of FAD-Modified Monolayers Assembled onto Au-Electrodes", *J. Am. Chem. Soc.* 118, pp. 10321-10322 (1996).

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